REMARKS

Double Patenting

Claims 1, 10 and 13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4, 10, 11, and 16 of US Patent No. 7,027,651 (Simon et al.).

While the Applicant disagrees with this rejection, a terminal disclaimer is being filed herewith. The Applicant believes this rejection has been overcome.

Claim Rejections – 35 USC § 102

Claims 1, 10 and 13 are rejected under 35 USC 102(b) as being anticipated by the article "Robust Affine Invariant Matching with Application to line Features" by Tsai.

The Applicant hereby submits that the 35 USC §102 rejection is defective and requests that it be withdrawn. The single prior art reference does not disclose every limitation in claims 1, 10, and 13. In accordance with MPEP §2131:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ... "The identical invention must be shown in as complete detail as contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F. 2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim."

Contrary to the examiner's position that all elements are disclosed in the Tsai reference, "in the texture engine, determining, for each one of said at least one basis, an affine invariant representation of said at least one target primitives" is not. The Examiner has made assumptions about the reference that have no actual basis and therefore, it cannot be said that the identical invention is shown in as complete detail as in the claims.

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The Examiner states that Tsai teaches computer vision for object recognition and a recognition stage wherein a computer visions algorithm is viewed from a camera, and that these features of allowing an output to be displayed is a product of a GPU, thereby implicitly teaching a texture engine in the reference. As is known to a person skilled in the art, a GPU is typically used to display graphics or text. However, the Examiner cannot assume that a GPU is being used to do any of the steps of object recognition as described in the method. The Examiner himself has used examples of graphics display to show that a GPU is present. This is evidence that Tsai does not address the use of a GPU for the operations being performed that are related to the object recognition. Other means may be used to do object recognition and what is known in the prior art is to do these steps using software capabilities. A Central Procession Unit (CPU) has the capability of performing these functions in software if it is programmed to do so. A Graphics Procession Unit (GPU) has a built-in hardware capability and differs from a CPU. A distinction is made between a CPU and a GPU, as is evidenced by the statement found at paragraph [0007] of the specification as originally filed, which states that "The invention provides a geometric hashing method implementation using both a host processor (also referred to herin as a Central Procession Unit, or CPU) and a texture engine that can be embedded in a Graphical Processing Unit (GPU)". Hence, the Examiner has merely assumed that Tsai teaches the use of a GPU for performing object recognition while there is no evidence in the reference to suggest this. Moreover, the Applicant hereby submits that the Examiner has taken another leap in assuming that the reference teaches the use of a texture engine for performing object recognition, and that this assumption is also unsupported by the reference.

The Applicant respectfully submits that Tsai does not actually state how any of the described operations are performed. Since a GPU is not the only means by which the operations can be performed, the Examiner cannot assume that the reference teaches the use of a GPU to perform the given operations. Furthermore, Tsai does not mention, either implicitly or explicitly, a texture engine. The method itself is disclosed without specifically addressing the computer system into which the method is to be implemented.

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Therefore, the Applicant respectfully submits that the §102 rejection is defective and that it be withdrawn.

Claim Rejections – 35 USC §103

Claims 2-9 are rejected under 35 USC 103(a) as being unpatentable over Tsai in view of Denneau et al. (6,348,833).

In light of the above statements with respect to the §102 rejection, the Examiner is asked to reconsider. As per *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), and in MPEP §2143, to make a prima facie case of obviousness when evaluating a claim, all limitations of the claim must be found in the cited art. Since, at the least, the cited art does not disclose "in the texture engine, determining, for each one of said at least one basis, an affine invariant representation of said at least one target primitives" as claimed, the 103(a) rejection of claims 2-9 on the basis of Tsai and Denneau is improper and the Applicant requests that it be withdrawn.

Conclusions

In view of the foregoing, the Applicant believes the present application to be patentable and early and favorable notice is earnestly solicited.

Respectfully submitted,
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